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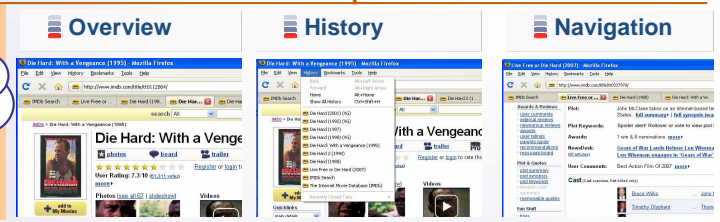
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In the context of current browser-based navigation

- Universal, widespread and powerful tool
- WIMP: Windows, Icon, Menu, Pointer
- Incremental features
 - Multiple Plug-ins/Extensions
 - AJAX – Asynchronous communications
 - Rich client applications
- No disruptive interface innovation



We identified and focused on three improvable features

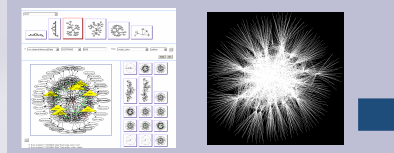


Our approach is to combine the following techniques..

..as a complement to current browser-based navigation

Visualization On-Demand

A Service Oriented Architecture (VizOD) [7] providing up-to-date Information Visualization techniques, such as multi-resolutions maps.



The VizOD API playground [3] allows users to pick up graph layout, attributes, rendering, etc.. Data are extracted given a URL.

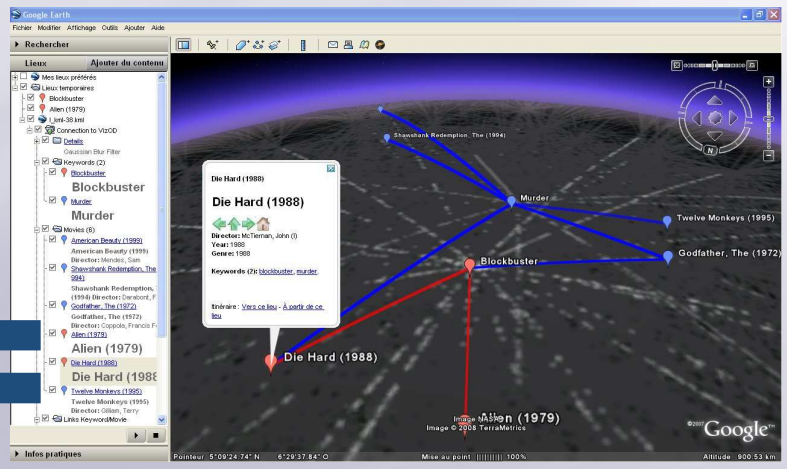
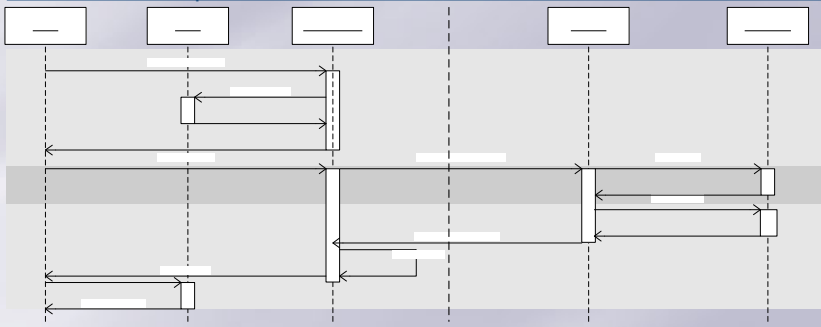
Virtual Globe

A 3D post-WIMP interface [6] allowing pan, zoom and rotate interaction. Intuitive metaphor to explore multi-resolution maps.



Google Earth [2] is used, instead of connecting to a geographical database is connected to VizOD using KML [1].

Architecture implemented



- Geographic Information features disabled : application to movies website navigation (IMDB)
- Details on-demand on the left sidebar

Website Overview

- Opened tabs and sessions are virtual locations on the globe
- Background image provides contextualization of the navigation

Path History

- Browser's default color coding
- Visited pages and paths (giving information on incoming link to page)

Alternative Navigation

- A browser toolbar up icon allows effortless launch/focus on the globe

Preliminary Results

- A smooth and appealing prototype [4] respecting HCI design recommendations [5]
- Quick users adoption as a complement to browser-based navigation and close to their mental model

Future Work

- Evaluations with complex study cases
- Improve prototype and explore other interactive environments



2D version

References

[1] <http://code.google.com/apis/kml/documentation/> KML 2.1 Reference. 2008.
 [2] <http://earth.google.com/>, Google earth. 2008.
 [3] <http://vizod.liris.cnrs.fr/api/>, Visualization on-demand API. 2008.
 [4] <http://vizod.liris.cnrs.fr/projects/vizod/ge/>, Vizod+GE Prototype. 2008.
 [5] B. Shneiderman, Why not make interfaces better than 3d reality? IEEE Comput. Graph. Appl., 23(6):12–15, 2003.
 [6] A. van Dam, Post-wimp user interfaces. Communications of the ACM, 40(2):63–67, 1997.
 [7] R. Vuillemot, B. Rumpier, and J.-M. Pinon, Anatomy of a visualization on-demand server. In ICEIS 2008, 2008.

